



CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

Purpose Permit number:	CPS 5633/1
Permit Holder:	City of Armadale
Duration of Permit:	7 September 2013 – 7 September 2018

The Permit Holder is authorised to clear native vegetation subject to the following conditions of this Permit.

PART I – CLEARING AUTHORISED

1. Purpose for which clearing may be done

Clearing for the purpose of fence line maintenance

2. Land on which clearing is to be done

Lot 106 on Deposited Plan 27606 (WUNGONG 6112)
Unnamed Railway Reserve (WUNGONG 6112)

3. Area of Clearing

The Permit Holder must not clear more than 0.0273 hectares of native vegetation within the area hatched yellow on attached Plan 5633/1.

4. Application

This Permit allows the Permit Holder to authorise persons, including employees, contractors and agents of the Permit Holder, to clear native vegetation for the purposes of this Permit subject to compliance with the conditions of this Permit and approval from the Permit Holder.

5. Type of clearing authorised

This Permit authorises the Permit Holder to clear native vegetation for the activities described in condition 1 of this Permit to the extent that the Permit Holder has the power to carry out works involving clearing for those activities under the *Local Government Act 1995* or any other written law.

PART II – ASSESSMENT SEQUENCE AND MANAGEMENT PROCEDURES

6. Dieback and weed control

When undertaking any clearing or other activity authorised under this Permit, the Permit Holder must take the following steps to minimise the risk of the introduction and spread of *weeds* and *dieback*:

- clean earth-moving machinery of soil and vegetation prior to entering and leaving the area to be cleared;
- ensure that no *dieback* or *weed*-affected soil, *mulch*, *fill* or other material is brought into the area to be cleared; and
- restrict the movement of machines and other vehicles to the limits of the areas to be cleared.

DEFINITIONS

The following meanings are given to terms used in this Permit:

dieback means the effect of *Phytophthora* species on native vegetation;

fill means material used to increase the ground level, or fill a hollow;

mulch means the use of organic matter, wood chips or rocks to slow the movement of water across the soil surface and to reduce evaporation;

weed/s means any plant -

- (a) that is a declared pest under section 22 of the *Biosecurity and Agriculture Management Act 2007*; or
- (b) published in the former Department of Environment and Conservation Regional Weed Assessments, regardless of ranking; or
- (c) not indigenous to the area concerned.

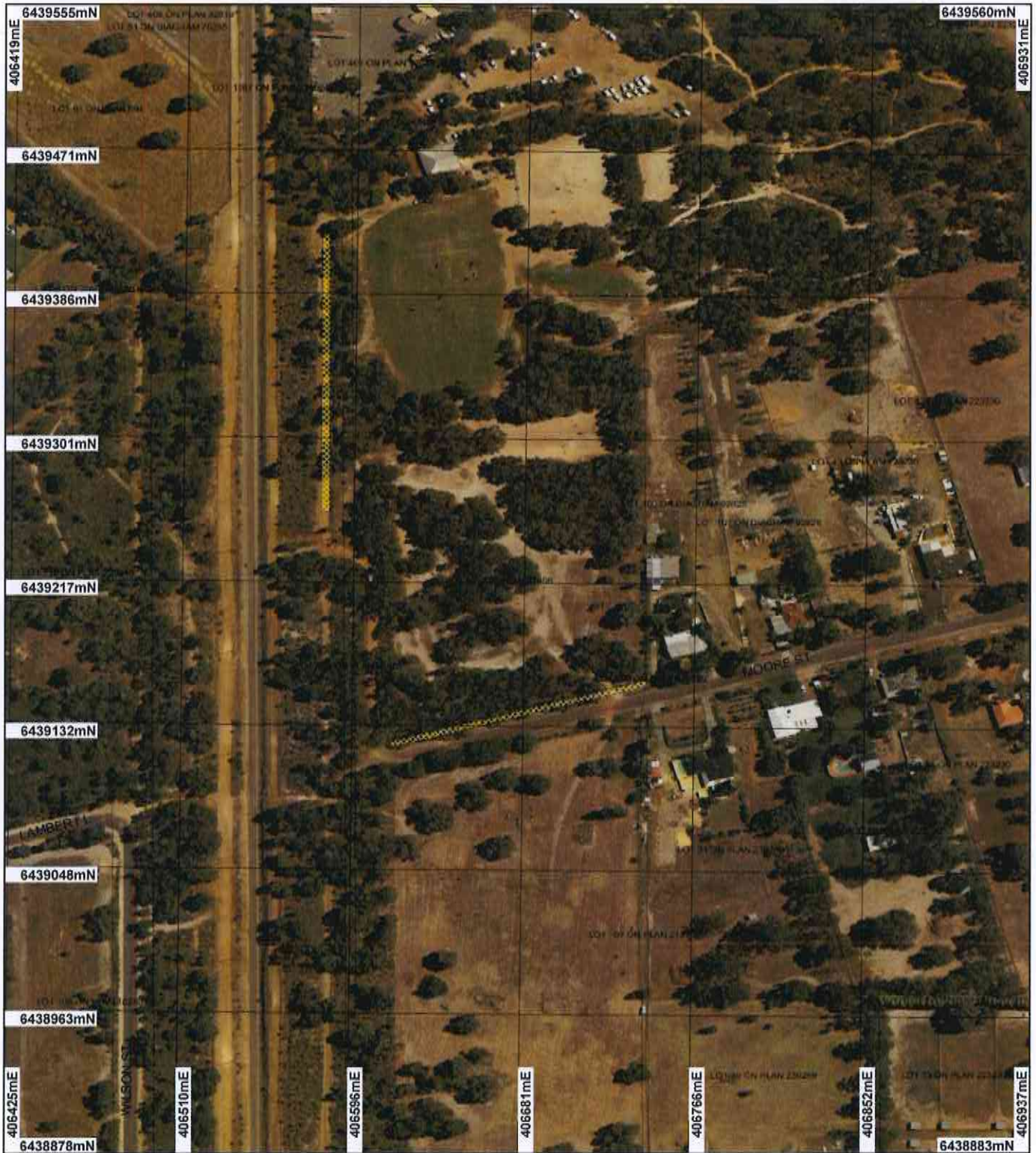


M Warnock
MANAGER
NATIVE VEGETATION CONSERVATION BRANCH





*Officer delegated under Section 20
of the Environmental Protection Act 1986*

8 August 2013

Plan 5633/1



LEGEND

-  Road Centrelines
-  Cadastre for labelling
-  Clearing Instruments
-  Areas Approved to Clear

Perth Metropolitan Area
Central 15cm Orthomosaic -
Landgate 2012



Scale 1:3000

(Approximate when reproduced at A4)

Geocentric Datum Australia 1994

Note: the data in this map have not been projected. This may result in geometric distortion or measurement inaccuracies.

M Warnock Date 8/8/13

M Warnock

Officer with delegated authority under Section 20 of the Environmental Protection Act 1986

Information derived from this map should be confirmed with the data custodian acknowledged by the agency acronym in the legend.



Government of Western Australia
Department of Environment Regulation

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1. Application details

1.1. Permit application details

Permit application No.: 5633/1
Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: City of Armadale

1.3. Property details

Property: LOT 106 ON PLAN 27606 (Lot No. 106 STONE WUNGONG 6112)
RAILWAY RESERVE (WUNGONG 6112)
Local Government Area: City of Armadale
Colloquial name:

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
0.0273		Mechanical Removal	Fence Line Maintenance
		Mechanical Removal	Fence Line Maintenance

1.5. Decision on application

Decision on Permit Application: Grant
Decision Date: 8 August 2013

2. Site Information

2.1. Existing environment and information

2.1.1. Description of the native vegetation under application

Vegetation Description	Clearing Description	Vegetation Condition	Comment
Mapped Beard vegetation association 968 is described as Medium woodland; jarrah, marri & wandoo (Shepherd et al 2001).	Fence Line Maintenance in Fletcher Park Reserve, City of Armadale.	Degraded: Structure severely disturbed; regeneration to good condition requires intensive management (Keighery 1994)	No trees will be cleared as part of the fence replacement. Where large trees, substantial vegetation or grass trees have grown around the existing fence, the new fence alignment will be slightly deviated around them (City of Armadale 2013).
Mattiske Complex: Fo: Mosaic of open forest of <i>Corymbia calophylla</i> - <i>Eucalyptus wandoo</i> - <i>Eucalyptus marginata</i> subsp. <i>elegantella</i> and open forest of <i>Eucalyptus marginata</i> sub sp (Mattiske and Havel 1998).	The application proposes to clear 0.0273 hectares of native vegetation within Lot 106 on Deposited Plan 27606-Reserve 14217 and an unnamed Railway Reserve, Wungong, for the purpose of fence line maintenance.	To	The condition of the native vegetation under application was determined by digital imagery (Perth Metropolitan Area Centralid 15 cm Orthomosaic - Landgate 2012) and photographs supplied by the applicant (City of Armadale 2013).
Hedde Complex: Forrestfield Complex: Vegetation ranges from open forest of <i>Corymbia calophylla</i> (Marri) - <i>Eucalyptus wandoo</i> (Wandoo) - <i>Eucalyptus marginata</i> (Jarrah) to open forest of <i>Eucalyptus marginata</i> (Jarrah) - <i>Corymbia calophylla</i> (Marri) - <i>Allocasuarina fraseriana</i> (Sheoak) - <i>Banksia</i> species. Fringing woodland of <i>Eucalyptus rudis</i> (Flooded Gum) in the gullies that dissect this landform (Hedde et al 1980).		Good: Structure significantly altered by multiple disturbance; retains basic structure/ability to regenerate (Keighery 1994)	

3. Assessment of application against clearing principles

(a) Native vegetation should not be cleared if it comprises a high level of biological diversity.

Comments

Proposal is not likely to be at variance to this Principle

The application proposes to clear 0.0273 hectares of native vegetation within Lot 106 on Deposited Plan 27606 - Reserve 14217 and an unnamed Railway Reserve, Wungong, for the purpose of fence line maintenance. The vegetation proposed to be cleared is in a degraded to good (Keighery 1994) condition. No trees will be cleared as part of the fence replacement. Where large trees, substantial vegetation or grass trees have grown around the existing fence, the new fence alignment will be slightly deviated around them (City of Armadale 2013).

Numerous fauna species listed as rare or likely to become extinct under the Wildlife Conservation Act 1950 have been recorded within the local area (10 kilometre radius), including: *Calidris ferruginea* (Curlew Sandpiper), *Calyptorhynchus banksii* subsp. *naso* (Forest Red-tailed Black-Cockatoo), *Calyptorhynchus latirostris* (Carnaby's Cockatoo), *Dasyurus geoffroii* (Chuditch, Western Quoll), *Leioproctus douglasiellus* (bee), *Myrmecobius fasciatus* (Numbat), *Neopasiphae simplicior* (bee), *Perameles bougainville* (Western Barred Bandicoot, Marl), *Phascogale tapoatafa* subsp. *tapoatafa* (Southern Brush-tailed Phascogale) (DEC 2007-). Given the small area (0.0273 hectares) under application that has previously been disturbed the vegetation proposed to be cleared is not likely to comprise of significant habitat for fauna indigenous to Western Australia.

Numerous priority flora have been recorded within the local area (10 kilometre radius). Given the small area (0.0273 hectares) under application that has previously been disturbed the vegetation proposed to be cleared is not likely to be necessary for the continued existence of priority flora.

One rare flora species has been recorded approximately 35 metres from the application area. The applicant has advised that large trees 'substantial vegetation' and Xanthorrhoeas will be avoided during construction and the weed control will be undertaken following fence completion. Therefore it is unlikely the clearing as proposed will have an impact on this rare flora species. The applicant will be advised that they should identify the species of rare flora and mark it temporarily to ensure that it will not be impacted during the proposed fence maintenance.

A threatened ecological community (TEC), 'Eucalyptus calophylla - Kingia australis woodlands on heavy soils' (SCP3a), is located within the northern application area within the unnamed Railway Reserve. The proposed clearing will impact some vegetation in a good (Keighery 1994) condition. However, the total proposed clearing is small (0.0273 hectares) and the area within the TEC has been impacted in the past by fence construction. In addition the fence upgrade will help reduce unauthorised vehicle access and therefore protect the TEC adjacent to the application area.

Given the above the clearing as proposed is not likely to be at variance to this principle.

Methodology

References:

- City of Armadale (2013)
- DEC (2007-)
- Keighery (1994)

GIS Databases:

- SAC Biodata sets - accessed July 2013

(b) Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of, a significant habitat for fauna indigenous to Western Australia.

Comments

Proposal is not likely to be at variance to this Principle

Numerous fauna species listed as rare or likely to become extinct under the Wildlife Conservation Act 1950 have been recorded within the local area (10 kilometre radius), including: *Calidris ferruginea* (Curlew Sandpiper), *Calyptorhynchus banksii* subsp. *naso* (Forest Red-tailed Black-Cockatoo), *Calyptorhynchus latirostris* (Carnaby's Cockatoo), *Dasyurus geoffroii* (Chuditch, Western Quoll), *Leioproctus douglasiellus* (bee), *Myrmecobius fasciatus* (Numbat), *Neopasiphae simplicior* (bee), *Perameles bougainville* (Western Barred Bandicoot, Marl), *Phascogale tapoatafa* subsp. *tapoatafa* (Southern Brush-tailed Phascogale) (DEC 2007-).

Given the small area under application (0.0273 hectares) and has been previously disturbed by fence construction and the applicant has advised that large trees 'substantial vegetation' and Xanthorrhoeas will be avoided during construction. The vegetation proposed to be cleared is not likely to contain significant habitat for fauna indigenous to Western Australia.

The fence upgrade will help reduce unauthorised vehicle access and therefore protect the vegetation adjacent to the proposed clearing areas.

Given the above the clearing as proposed is not likely to be at variance to this principle.

Sandpiper), *Calyptorhynchus banksii* subsp. *naso* (Forest Red-tailed Black-Cockatoo), *Calyptorhynchus latirostris* (Carnaby's Cockatoo), *Dasyurus geoffroi* (Chuditch, Western Quoll), *Leioproctus douglasiellus* (bee), *Myrmecobius fasciatus* (Numbat), *Neopasiphae simplicior* (bee), *Perameles bougainville* (Western Barred Bandicoot, Marl), *Phascogale tapoatafa* subsp. *tapoatafa* (Southern Brush-tailed Phascogale) (DEC 2007-). Given the small area (0.0273 hectares) under application that has previously been disturbed the vegetation proposed to be cleared is not likely to comprise of significant habitat for fauna indigenous to Western Australia.

Numerous priority flora have been recorded within the local area (10 kilometre radius). Given the small area (0.0273 hectares) under application that has previously been disturbed the vegetation proposed to be cleared is not likely to be necessary for the continued existence of priority flora.

One rare flora species has been recorded approximately 35 metres from the application area. The applicant has advised that large trees 'substantial vegetation' and *Xanthorrhoeas* will be avoided during construction and the weed control will be undertaken following fence completion. Therefore it is unlikely the clearing as proposed will have an impact on this rare flora species. The applicant will be advised that they should identify the species of rare flora and mark it temporarily to ensure that it will not be impacted during the proposed fence maintenance.

A threatened ecological community (TEC), 'Eucalyptus calophylla - *Kingia australis* woodlands on heavy soils' (SCP3a), is located within the northern application area within the unnamed Railway Reserve. The proposed clearing will impact some vegetation in a good (Keighery 1994) condition. However, the total proposed clearing is small (0.0273 hectares) and the area within the TEC has been impacted in the past by fence construction. In addition the fence upgrade will help reduce unauthorised vehicle access and therefore protect the TEC adjacent to the application area.

Given the above the clearing as proposed is not likely to be at variance to this principle.

Methodology

References:

- City of Armadale (2013)
- DEC (2007-)
- Keighery (1994)

GIS Databases:

- SAC Biodate sets - accessed July 2013

Officer

Clare Ryan

(b) Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of, a significant habitat for fauna indigenous to Western Australia.

Comments

Proposal is not likely to be at variance to this Principle

Numerous fauna species listed as rare or likely to become extinct under the Wildlife Conservation Act 1950 have been recorded within the local area (10 kilometre radius), including: *Calidris ferruginea* (Curlew Sandpiper), *Calyptorhynchus banksii* subsp. *naso* (Forest Red-tailed Black-Cockatoo), *Calyptorhynchus latirostris* (Carnaby's Cockatoo), *Dasyurus geoffroi* (Chuditch, Western Quoll), *Leioproctus douglasiellus* (bee), *Myrmecobius fasciatus* (Numbat), *Neopasiphae simplicior* (bee), *Perameles bougainville* (Western Barred Bandicoot, Marl), *Phascogale tapoatafa* subsp. *tapoatafa* (Southern Brush-tailed Phascogale) (DEC 2007-).

Given the small area under application (0.0273 hectares) and has been previously disturbed by fence construction and the applicant has advised that large trees 'substantial vegetation' and *Xanthorrhoeas* will be avoided during construction. The vegetation proposed to be cleared is not likely to contain significant habitat for fauna indigenous to Western Australia.

The fence upgrade will help reduce unauthorised vehicle access and therefore protect the vegetation adjacent to the proposed clearing areas.

Give the above the clearing as proposed is not likely to be at variance to this principle.

Methodology

References:

- DEC (2007-)

GIS Databases:

- SAC Biodate sets - accessed July 2013

Officer

Clare Ryan

The vegetation under application is mapped as Beard Vegetation Association 968, Heddle Vegetation Complex 'Forrestfield' and Mattiske Vegetation Complex 'Fo', which have approximately 7, 11 and 16 per cent of their Pre-European extent remaining in the Swan Coastal Plain bioregion respectively (Government of Western Australia 2013).

The National Objectives and Targets for Biodiversity Conservation include a target that prevents the clearance of ecological communities with an extent below 30 per cent of that present pre-European settlement (Commonwealth of Australia, 2001). However, the Environmental Protection Authority (EPA) recognises the Perth Metropolitan Region as a constrained area, which provides for the reduction of vegetation complexes to a minimum of 10 per cent of the pre-European extent (EPA, 2006).

Digital imagery (Perth Metropolitan Area Central 15 cm Orthomosaic - Landgate 2012) indicates that the local area (10 kilometre radius) surrounding the area under application retains approximately 40 per cent vegetation cover.

The area under application area is small (0.0273 hectares) and has been previously disturbed. However the application area is located within a threatened ecological community, a conservation category wetland and Bush Forever site 264, therefore the vegetation may be considered to be a significant remnant.

Therefore, the clearing as proposed may be at variance to this principle.

	Pre-European (ha)	Current Extent (ha)	Remaining (%)	Extent in DEC Managed Lands (%)
IBRA Bioregion*				
Swan Coastal Plain	1,501,221	587,708	39.15	35
Shire*				
City of Armadale	55,949	43,054	76.95	75
Beard Vegetation Association in Bioregion*				
968	136,188	9,795	7.19	16
Heddle Vegetation Complex **				
Forrestfield Complex	20,168	2,204	10.93	1
Mattiske Vegetation Complex **				
Fo	3,708	606	16.36	6

* Government of Western Australia (2013)

** Heddle et al (1980)

*** Mattiske and Havel (1998)

Methodology

References:

- Government of Western Australia (2013)
- Commonwealth of Australia (2001)
- Heddle et al (1980)
- Mattiske and Havel (1998)

GIS Databases:

- IBRA Australia
- Local Government Authority
- Perth Metropolitan Area Central 15 cm Orthomosaic - Landgate 2012
- Pre-European vegetation
- Heddle Vegetation

(f) Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland.

Comments

Proposal is at variance to this Principle

The northern application area within the unnamed Railway Reserve and a portion of the southern application area within Lot 106 is located within a Conservation Category Wetland (CCW). The remaining area within the application area within Lot 106 is located within a Multiple Use Wetland (MUW). CCW's are highest priority wetlands, which are considered to support a high level of ecological attributes and functions (Water and Rivers Commission 2001). The Water and Rivers Commission (2001) considers MUW's as having few important attributes and functions remaining.

The closest minor perennial watercourse is located approximately 210 metres north of the application area.

Given the application area is located within a CCW and MUW the vegetation proposed to be cleared is considered to be growing in association with a wetland. However given the small size (0.0273 hectares) of the area under application and that the area within the CCW has been impacted in the past by fence construction the clearing as proposed is not likely to have a significant impact on the CCW.

The fence upgrade will help reduce unauthorised vehicle access and therefore protect the CCW adjacent to the application area. The applicant has advised that large trees 'substantial vegetation' and Xanthorrhoea will be avoided during construction and the weed control will be undertaken following fence completion (DPaW 2013a).

The clearing as proposed may increase the spread of weeds and dieback into the adjacent CCW. Weed and dieback management practices will help mitigate this risk.

Given the above the clearing as proposed is at variance to this principle.

Methodology References:
- DPaW (2013a)
- Waters and Rivers Commission

GIS Databases:
- Geomorphic Wetlands, Swan Coastal Plain
- Hydrology, linear

(g) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation.

Comments **Proposal is not likely to be at variance to this Principle**

The soils within the application area can be described as plain: chief soils are sandy acidic yellow mottled soils some of which contain ironstone gravel. Associated are acid yellow earths. Other soils include containing ironstone gravel, low dunes of soils and some swamps with variable soils (Northcote et al 1960-1968).

Given the small area under application (0.0273 hectares), that the vegetation has been previously disturbed and that the applicant has advised that large trees 'substantial vegetation' and Xanthorrhoea will be avoided during construction. The vegetation proposed to be cleared is not likely to cause appreciable land degradation.

Therefore the clearing as proposed is not likely to be at variance to this principle.

Methodology References:
- Northcote et al (1960-1968)

GIS Databases:
- Soils, statewide

(h) Native vegetation should not be cleared if the clearing of the vegetation is likely to have an impact on the environmental values of any adjacent or nearby conservation area.

Comments **Proposal may be at variance to this Principle**

The area under application within the unnamed Railway Reserve is located within Bush Forever site 264. An unnamed nature reserve is located approximately 92 metres west of the application area.

The clearing as proposed may impact on the environmental values of the Bush Forever site located within the proposed clearing areas, however given the small area under application that has been previously disturbed, the clearing as proposed is not likely to have a significant impact on the environmental values of this Bush Forever site.

The proposed clearing may cause weed and dieback to spread into this Bush Forever site. Weed and dieback management practices will help mitigate the impacts of the proposed clearing.

Given the above, the clearing as proposed may be at variance to this principle.

Methodology GIS databases:
- Bush Forever

(i) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause deterioration in the quality of surface or underground water.

Comments **Proposal is not likely to be at variance to this Principle**

The northern application area within the unnamed Railway Reserve and a portion of the southern application area within Lot 106 is located within a Conservation Category Wetland (CCW). The remaining area within the

application area within Lot 106 is located within a Multiple Use Wetland (MUW). CCW's are highest priority wetlands, which are considered to support a high level of ecological attributes and functions (Water and Rivers Commission 2001). The Water and Rivers Commission (2001) considers MUW's as having few important attributes and functions remaining.

The closest minor perennial watercourse is located approximately 210 metres north of the application area.

The area under application is relatively flat and given the small area proposed to be cleared (0.0273 hectares) and that the application area has been impacted in the past by fence construction run off into the adjacent wetland is expected to be minimal. Therefore the clearing as proposed is not likely to cause deterioration in the quality of surface water.

Groundwater salinity has been recorded within 500 - 100 mg/L which is considered to be 'marginal'. Given the small area under application that has previously been disturbed the clearing as proposed is not likely to cause deterioration in the quality of underground water.

Given the above the clearing as proposed is not likely to be at variance to this principle.

Methodology References:
- Waters and Rivers Commission (2001)

GIS Databases:
-Geomorphic Wetlands, Swan Coastal Plain
- Hydrology, linear

(j) Native vegetation should not be cleared if clearing the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding.

Comments **Proposal is not likely to be at variance to this Principle**
The area under application is located within a Conservation Category Wetland and a Multiple Use Category Wetland.

However given the small area under application (0.0273 hectares), the vegetation has previously been disturbed by fence construction and the applicant has advised that large trees 'substantial vegetation' and Xanthorrhoea will be avoided during construction, the clearing as proposed is not likely to cause or exacerbate the incidence or intensity of flooding.

Therefore, the clearing as proposed is not likely to be at variance to this principle.

Therefore, the clearing as proposed is not likely to be at variance to this principle.

Methodology GIS Databases:
-Geomorphic Wetlands, Swan Coastal Plain

Planning instrument, Native Title, Previous EPA decision or other matter.

Comments
On 17 July 2013 the Public Transport Authority provided the City of Armadale with authority to access and clear native vegetation within the railway reserve, Wungong 6112 (PIN 11892229)

No submissions have been received.

No Aboriginal Sites of Significance are located within the application area.

Methodology

4. References

- Brown A., Thomson-Dans C. and Marchant N.(1998). Western Australia's Threatened Flora, Department of Conservation and Land Management, Western Australia.
- City of Armadale (2013) Supporting Information - Application to clear native vegetation at Fletcher Park Reserve for the purpose of a boundary fence. Western Australia. DER Ref:A636777
- DEC (2007 -) NatureMap: Mapping Western Australia's Biodiversity. Department of Environment and Conservation. URL: <http://naturemap.dec.wa.gov.au/>. Accessed July 2013
- DPaW (2013a) Species and Communities Advice - City of Armadale - CPS 5633/1 - 0.0273 ha - for the purpose of fence reconstruction and maintenance - threatened ecological community. Department of Parks and Wildlife. Western Australia. DER Ref: A646117)
- DPaW (2013b) Species and Communities Advice - City of Armadale - CPS 5633/1 - 0.0273 ha - for the purpose of fence reconstruction and maintenance - rare flora. Department of Parks and Wildlife. Western Australia. DER Ref:

A649755)

- Government of Western Australia. (2013). 2012 Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report). Current as of October 2012. WA Department of Environment and Conservation, Perth.
- Hedde, E. M., Loneragan, O. W., and Havel, J. J. (1980) Vegetation Complexes of the Darling System, Western Australia. In Department of Conservation and Environment, Atlas of Natural Resources, Darling System, Western Australia.
- Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.
- Mattiske, E.M. and Havel, J.J. (1998) Vegetation Complexes of the South-west Forest Region of Western Australia. Maps and report prepared as part of the Regional Forest Agreement, Western Australia for the Department of Conservation and Land Management and Environment Australia.
- Northcote, K. H. with Beckmann G G, Bettenay E., Churchward H. M., van Dijk D. C., Dimmock G. M., Hubble G. D., Isbell R. F., McArthur W. M., Murtha G. G., Nicolls K. D., Paton T. R., Thompson C. H., Webb A. A. and Wright M. J. (1960-68): 'Atlas of Australian Soils, Sheets 1 to 10, with explanatory data'. CSIRO and Melbourne University Press: Melbourne.
- Shepherd, D.P., Beeston, G.R., and Hopkins, A.J.M. (2001), Native Vegetation in Western Australia. Technical Report 249. Department of Agriculture Western Australia, South Perth.
- Water and Rivers Commission (2001) Position Statement: Wetlands, Water and Rivers Commission, Perth.

5. Glossary

Term	Meaning
BCS	Biodiversity Coordination Section of DEC
CALM	Department of Conservation and Land Management (now BCS)
DAFWA	Department of Agriculture and Food
DEC	Department of Environment and Conservation
DEP	Department of Environmental Protection (now DEC)
DoE	Department of Environment
DoIR	Department of Industry and Resources
DRF	Declared Rare Flora
EPP	Environmental Protection Policy
GIS	Geographical Information System
ha	Hectare (10,000 square metres)
TEC	Threatened Ecological Community
WRC	Water and Rivers Commission (now DEC)